

Appendix N

Haile Gold Mine EIS

Supporting Information and Analysis for Visual Resources Assessment

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N. METHODOLOGY FOR IDENTIFICATION OF KEY OBSERVATION POINTS

The study area for visual resources is defined as the area within the Project boundary, adjacent parcels, and viewing areas from where Project-related features and construction, operation, and maintenance activities have the potential to be visible.

To determine the potential short-term and long-term impacts of mining operations and the associated construction, key observations points (KOPs) were selected. KOPs are sites that were selected because they represent critical locations from which the Project would be seen by the public. KOPs were generally selected for one or two reasons: (1) the location provides representative views of the landscape along a specific route segment or in a general region of interest; or (2) the viewpoint effectively captures the presence or absence of a potentially adverse visual impact in that location.

Baseline data, including documentation and site maps from Haile Gold Mine, Inc., were reviewed to gain familiarity with the existing landscape, viewer sensitivity, and characteristics of the Project area. A GIS desktop analysis was conducted prior to the field assessment in order to identify public places near the Project site that best represented overall visibility of the site. During the spatial desktop review, sites near parks, roadways, schools, office buildings, recreational features, and other publicly accessible areas located within 3 miles of the Project site were considered.

The identification of the KOPs and assessment of potential visual effects of the Proposed Project were assessed considering possible changes in the visual character of the existing landscape, the scenic integrity, and potential viewer sensitivity, as follows:

- **Landscape Character** – Consideration of the changes to the existing landscape character such as topography and landforms, vegetation, landscape features (water and exposed rock) and cultural modification or development.
- **Scenic Integrity** – Consideration of the extent to which the existing landscape was previously altered; and therefore, changes to the landscape would not be as readily apparent as compared to a landscape that was unaltered and more natural in appearance.
- **Viewer Sensitivity and Viewing Distance** – Consideration of the potential number of viewers, the duration of the views, the context of the viewing setting, viewing distances, and viewer expectations. For example, viewers would be more sensitive to landscape changes to foreground and middle ground.

Initially, 29 observation points were identified based on their proximity to public areas. Next, a desktop site sensitivity analysis was conducted by generating viewsheds at each observation point. To determine visual impacts throughout the life span of the proposed Project, three viewsheds were created for each KOP that depicted different time periods during the proposed Project (existing conditions, Year 7, and Year 15). A field assessment was then conducted to determine whether the proposed Project site was visible from each of these potential KOP locations, considering potential viewer locations, and existing vegetative conditions, site features, and topography. Photographs and visual characteristics of the KOPs in relation to the proposed Project were collected. As a result of this assessment, 15 KOPs were identified that had the potential to be affected by the Proposed Project. See Figure N-1 for location and Table N-1 for a summary of the identified KOPS.

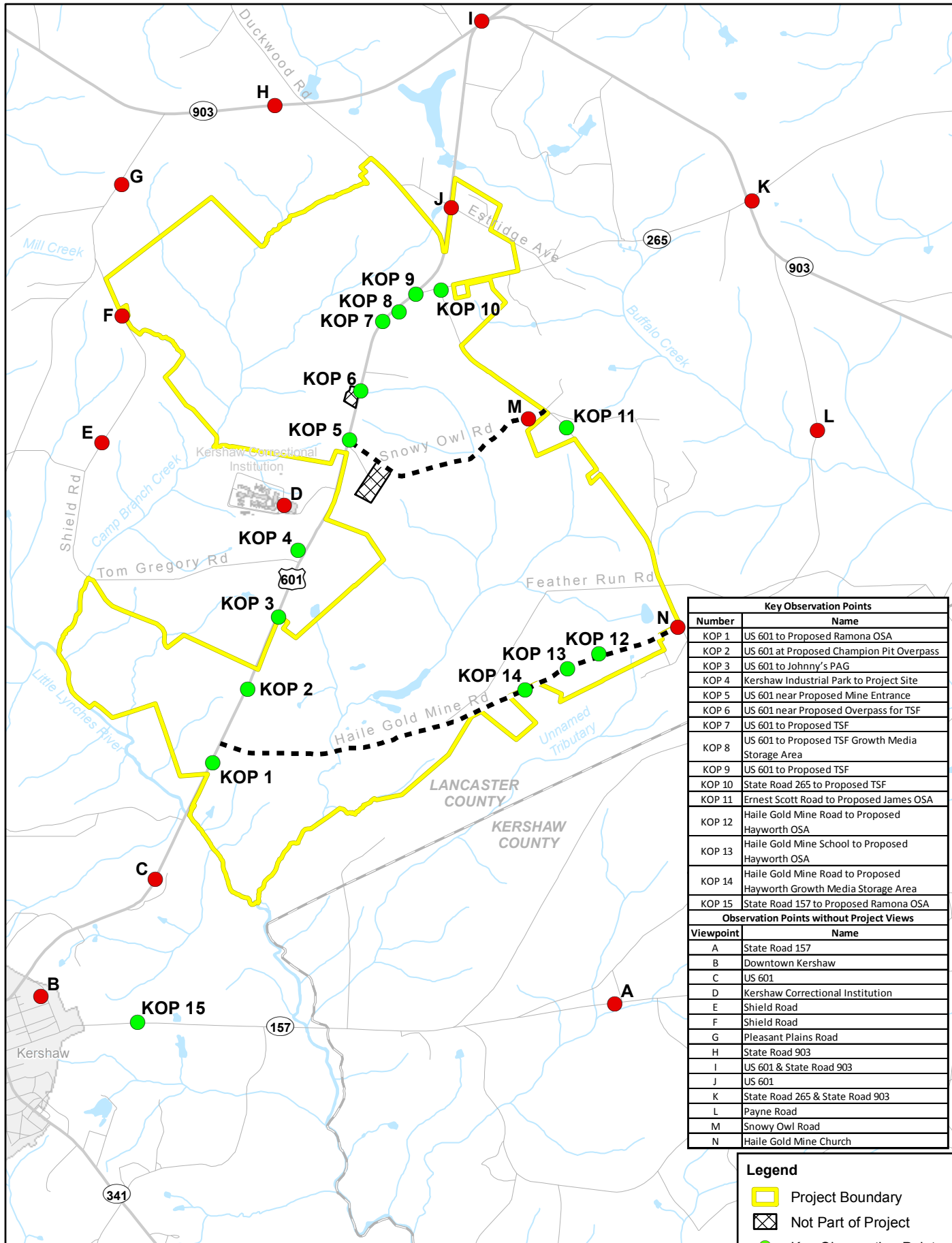


Figure N-1

Locations of Key Observation Points in the Study Area

0 1,000 2,000 Feet
0 300 600 Meters

Source: ESRI 2008.

Table N-1 Description of Key Observation Points in the Study Area

Number	Action Site Visibility			Description
	None	Some	Open	
1			x	Roadside view of proposed Ramona OSA along US 601. A roadside vegetated berm would provide partial blockage, but the Ramona OSA would be clearly visible approximately 200 feet from the road.
2			x	Proposed Champion Pit roadway overpass. Travelers along US 601 would pass under the proposed overpass.
3		x		Roadside view along US 601 from a residence parcel. Distant views of proposed Johnny's PAG would be visible.
4		x		Parking lot of Kershaw Industrial Park located along US 601. The vegetation buffer along the highway is thinner at this location. The proposed Johnny's PAG would be visible in the distance, approximately 0.4 mile away.
5			x	Proposed Haile Gold Mine plant entrance. Vegetation along roadside the roadside would be cleared to construct entrance.
6			x	Proposed TSF and slurry pipe overpass. Travelers along US 601 would pass under the proposed overpass.
7			x	Roadside view along US 601. A break in the vegetation buffer would allow clear views of the proposed TSF approximately 200 feet away.
8			x	Roadside view along US 601. A thick vegetation buffer is along the highway near the proposed TSF growth media storage area.
9			x	Roadside view along US 601. A break in the vegetation buffer would allow clear views of the proposed TSF approximately 200 feet away.
10		x		Roadside view along State Road 265 approaching the intersection with US 601. The proposed TSF would be visible in the distance, approximately 900 feet away.
11		x		Roadside view along Ernest Scott Road. Views of proposed James OSA would be in the distance, approximately 0.4 mile away.
12		x		Roadside view from Haile Gold Mine Road that is proposed to be closed. Vegetation has been previously cleared, with low growth. Proposed Hayworth OSA would be visible in the distance, approximately 0.3 mile away.
13		x		Roadside view from the vicinity of Haile Gold Mine School on Haile Gold Mine Road that is proposed to be closed. Proposed Hayworth OSA would be visible in the distance, approximately 0.3 mile away.
14		x		Roadside view from Haile Gold Mine Road that is proposed to be closed. Proposed Hayworth growth media storage area would be visible in the distance behind tall vegetation, approximately 0.1 mile away.
15		x		State Route 157. A clearing in the vegetation would allow a very distant view of proposed Ramona OSA, approximately 1.4 miles away.
A	x			Roadside view along State Road 157 with no views of the Project site; proposed Hilltop OSA would be located approximately 2.0 miles away.
B	x			View from downtown Kershaw with no views of the Project site.

Table N-1 Description of Key Observation Points in the Study Area (Continued)

Number	Action Site Visibility			Description of the Location and View
	None	Some	Open	
C	x			Roadside view south of the Project site along US 601. The proposed Ramona OSA, approximately 0.5 mile away, would not be visible due to dense foreground vegetation.
D	x			View from the Kershaw Correctional Institution parking lot in a valley, with no views of the Project site. The proposed TSF would be approximately 0.8 mile away.
E	x			Roadside view along Shield Road with no views of the Project site. The proposed TSF would be approximately 1.2 miles away.
F	x			Roadside view along Shield Road with no views of the Project site. The proposed TSF would be approximately 0.75 mile away.
G	x			Roadside view along Pleasant Plains Road with no views of the Project site. The proposed TSF would be approximately 0.75 mile away.
H	x			Roadside view along State Road 903 with no views of the Project site. The proposed TSF would be approximately 0.75 mile away.
I	x			Roadside view from the intersection of US 601 and State Road 903 with no views of the Project site. The proposed TSF would be approximately 1.3 miles away.
J	x			Roadside view along US 601 at north end of the Project site. Dense foreground vegetation would block views of Project site.
K	x			Roadside view at the intersection of State Road 265 and State Road 903 with no views of the Project site. The proposed TSF would be approximately 2.0 miles away.
L	x			Roadside view along Payne Road with no views of the Project site. The proposed James OSA would be approximately 1.5 miles away.
M	x			Roadside view along Snowy Owl Road that is proposed to be closed, with no views of the Project site.
N	x			View from the Haile Gold Mine Church parking lot. The dense foreground vegetation that towers over 40 feet tall would block views of the Project site. The proposed Robert OSA would be 0.4 miles away.

Notes:

OSA = Overburden storage area

TSF = Tailings storage facility

US 601 = US Highway 601

N.1 Existing Visual Conditions at the Key Observation Points

KOP 1 is located along US 601 in the vicinity of the proposed Ramona OSA. The existing views consist of interspersed vegetation with a roadside vegetation berm along portions of US 601.



Figure N-2 KOP 1: US 601 to Proposed Ramona OSA

KOP 2 is located along US 601 at the existing mining access roads, near the previously mined Champion Pit. The vegetation in the area is primarily along the roadside, and existing views of the Project site are limited. The Champion Pit roadway crossing is proposed at this location; travelers on US 601 would pass under the overpass.



Figure N-3 KOP 2: US 601 at Proposed Champion Pit Roadway Crossing

KOP 3 is a residential parcel along US 601 in the vicinity of the proposed 601 OSA. The existing view includes US 601 and vegetative buffers along both the west and east sides that restrict views of the Project site. The proposed Johnny's PAG would be visible in the distance from this location.



Figure N-4 KOP 3: US 601 to Johnny's PAG

KOP 4 is located in the parking lot of the Kershaw Industrial Park. The parking lot is separated from the road by an open grassy area, with little changes in topography and primarily flat terrain. A thin vegetative buffer is located along the distant side of US 601. The proposed Johnny's PAG would be visible in the distance from this location.



Figure N-5 KOP 4: Kershaw Industrial Park to Project Site

KOP 5 is located north of the Kershaw Industrial Park, at the location of the proposed Haile Gold Mine entrance access road along US 601. Existing views at this KOP include some open areas with a few structures and an existing mine access road.



Figure N-6 KOP 5: US 601 near Proposed Mine Entrance

KOP 6 is located in the vicinity of the proposed roadway overpass for the proposed TSF facility. Travelers along US 601 would pass under the overpass. Existing views are of the roadway and the primarily forested, vegetative buffers along both sides of US 601.



Figure N-7 KOP 6: US 601 near Proposed Overpass
for TSF

KOP 7 represents views west from US 601 in the vicinity of the proposed TSF. The existing topography is flat, with sparse vegetation consisting of intermittent trees and shrubs. A break in the vegetation would allow clear views of the TSF approximately 200 feet away.



Figure N-8 KOP 7: US 601 to Proposed TSF

KOP 8 is located adjacent to KOP 7, with views to the east of US 601 in the vicinity of the proposed TSF growth media storage area. The existing topography is flat, with areas of vegetation along the roadside and dispersed open scrub/shrub areas.



Figure N-9 KOP 8: US 601 to Proposed TSF Growth Media Storage Area

KOP 9 represents views of individuals traveling on SR 265 approaching the intersection with US 601. The topography is flat, and the vegetation on either side of US 601 consists of dense trees and shrubs that are slightly set back from the road. The existing view is dominated by US 601 and flat grassy areas. A break in the vegetation buffer would allow clear views of the proposed TSF approximately 200 feet away.



Figure N-10 KOP 9: US 601 to Proposed TSF

KOP 10 is the view approaching the intersection of SR 265 and US 601 in the vicinity of the proposed TSF. The area is relatively flat, with dispersed vegetation. The proposed TSF would be visible in the distance, approximately 900 feet away.



Figure N-11 KOP 10: State Road 265 to Proposed TSF

KOP 11 consists of views from Ernest Scott Road in the vicinity of the proposed James OSA. The topography is relatively flat. The vegetation is interspersed, with some trees closer to the roadway and open grassland areas in the more distant views. The proposed James OSA would be visible in the distance, approximately 900 feet away.



Figure N-12 KOP 11: Ernest Scott Road to Proposed James OSA

KOP 12 is a roadside view from Haile Gold Mine Road that is proposed to be closed. The existing views include forested areas and open scrub/shrub areas that are located on either side of the roadway. The vegetation has been previously cleared, with low growth. The proposed Hayworth OSA would be visible in the distance, approximately 0.3 mile away.



Figure N-13 KOP 12: Haile Gold Mine Road to Proposed Hayworth OSA

KOP 13 is a roadside view from the historic Gold Mine School to Haile Gold Mine Road that is proposed to be closed. The existing views from the vicinity of the school include some open areas, dispersed trees and vegetation, and areas of more dense vegetative growth. The proposed Hayworth OSA would be visible in the distance, approximately 0.3 mile away.



Figure N-14 KOP 13: Haile Gold Mine School to Proposed Hayworth OSA

KOP 14 is a roadside view from Haile Gold Mine Road west of the Historic Gold Mine School. Views are of the roadway corridor; roadside views are predominantly of forested areas, with a few areas of scrub/shrub and lower vegetative growth. The proposed Hayworth growth media storage area would be visible in the distance behind tall vegetation, approximately 0.1 mile away.



Figure N-15 KOP 14: Haile Gold Mine Road to Proposed Hayworth Growth Media Storage Area

KOP 15 represents views of travelers on SR 157 to the Project area. The topography at KOP 15 consists of gently rolling hills, and the vegetation in the foreground is a clear grassy area. Tall, dense trees are located in the middle ground views, and grassy hills are visible in the distant background beyond the trees. This KOP represents one of the farthest locations from the mine site from which Project features

could be visible (approximately 1.4 miles in the distance) because of a clearing in vegetation. The proposed Ramona OSA would be visible in this clearing.



Figure N-16 KOP 15: State Road 157 to Proposed Ramona OSA

N.2 Selection of Representative Key Observation Points for Visual Simulation

The 15 KOPs were further reviewed to identify those KOPS that provided either representative views and/or critical viewing locations (such as key views along highway US 601) to further assess potential visual impacts. Accordingly, six representative KOPs were selected that provide representative views of the most visible aspects of the Project as seen from viewing locations that typify visually sensitive locations. See Table N-2 for a summary of rationale for selection of these six KOPs.

Table N-2 Summary Selection Criteria for Representative Key Observation Points

Number	Name of Key Observation Point	Description of the Location and View	Selection Criteria for Visual Simulation and Further Analysis
KOP 1	US 601 to proposed Ramona OSA	Roadside view along US 601 of proposed Ramona OSA. A roadside vegetation berm with vegetation provides partial blockage, but the proposed Ramona OSA would be clearly visible approximately 300 feet from the highway.	Selected for visual simulation – the proposed Ramona OSA would be clearly visible approximately 300 feet from the highway.
KOP 2	US 601 at proposed Champion Pit overpass	View from US 601 of proposed Champion Pit highway overpass. Travelers along US 601 would pass under the proposed overpass.	Not selected for visual simulation – KOP 6 provides similar type of proposed overpass facility and representative view of this proposed Project feature.
KOP 3	US 601 to Johnny's PAG	Roadside view along US 601 from residence parcel with distant views of proposed Johnny's PAG.	Not selected for visual simulation –. KOP 15 provides representative views of distant views of Project features, such as OSAs and PAG.
KOP 4	Kershaw Industrial Park to Project site	View of Project site from the parking area at the Kershaw Industrial Park along US 601. The vegetation buffer along the highway is thinner at this location. The proposed Johnny's PAG would be visible in the distance, approximately 0.4 mile away.	Selected for visual simulation - provides view from Industrial Park that would be located where public could view project features.
KOP 5	US 601 near proposed mine entrance	View of Project site from US 601 near proposed new Haile Gold Mine plant entrance. Vegetation would be cleared along the roadside to construct the entrance.	Not selected for visual simulation – views from US 601 provided in other KOPs (1, 4, 6, 7) and those locations would include Project features, such as Ramona OSA and the TSF that would have greater potential for visual impacts.
KOP 6	US 601 near proposed overpass for TSF	View of Project area from US 601 near proposed highway and slurry pipe overpass. Travelers along US 601 would pass under the proposed overpass.	Selected for visual simulation - Travelers along US 601 would pass under the proposed overpass.
KOP 7	US 601 to proposed TSF	Roadside view along US 601 looking west. A break in the vegetation buffer would allow clear views of the proposed TSF approximately 200 feet away.	Selected for visual simulation - A break in the vegetation buffer would allow clear views of the proposed TSF approximately 200 feet away.
KOP 8	US 601 to proposed TSF growth media storage area	Roadside view along US 601 looking east. A thick vegetation buffer is along the highway near the proposed TSF growth media storage area.	Not selected for visual simulation – several other representative views of the TSF facility (6, 7, 10) were selected for assessment.

Table N-2 Summary Selection Criteria for Representative Key Observation Points (Continued)

Number	Name of Key Observation Point	Description of the Location and View	Selection Criteria for Visual Simulation and Further Analysis
KOP 9	US 601 to proposed TSF	Roadside view along US 601. A break in the vegetation buffer would allow clear views of the proposed TSF approximately 200 feet away.	Not selected for visual simulation — several other representative views of the TSF facility (6, 7, 10) were selected for assessment.
KOP 10	State Road 265 to proposed TSF	View from Old Jefferson Highway (State Road 265) approaching the intersection of US 601. The proposed TSF would be visible in the distance, approximately 900 feet away.	Selected for visual simulation - The proposed TSF would be visible in the distance, approximately 900 feet away.
KOP 11	Ernest Scott Road to proposed James OSA	Roadside view from Ernest Scott Road. The proposed James OSA would be visible in the distance, approximately 0.4 mile away.	Not selected for visual simulation — KOP 15 provides representative view of distant views of Project features, such as OSAs.
KOP 12	Haile Gold Mine Road to proposed Hayworth OSA	Roadside view from Haile Gold Mine Road that is proposed to be closed. Vegetation has been previously cleared. The proposed Hayworth OSA would be visible in the distance, approximately 0.3 mile away.	Not selected for visual simulation — due to proposed closure of road, public viewing potential from this location would not occur. KOP 15 provides representative view of distant views of Project features, such as OSAs
KOP 13	Haile Gold Mine School to proposed Hayworth OSA	Roadside view from the vicinity of the historic Haile Gold Mine School on Haile Gold Mine Road, which is proposed to be closed. The Hayworth OSA would be visible in the distance, approximately 0.3 mile away.	Not selected for visual simulation — KOP 15 provides representative view of distant views of Project features, such as OSAs.
KOP 14	Haile Gold Mine Road to proposed Hayworth growth media storage area	Roadside view from Haile Gold Mine Road that is proposed to be closed. The proposed Hayworth growth media storage area would be visible in the distance behind tall vegetation, approximately 0.1 mile away.	Not selected for visual simulation — due to proposed closure of road, public viewing potential from this location would not occur. KOP 15 provides representative view of distant views of Project features, such as OSAs.
KOP 15	State Road 157 to proposed Ramona OSA	View of travelers on State Road 157 to the Project area (approximately 1.4 miles in the distance). A clearing in the vegetation would allow a very distant view of the proposed Ramona OSA, approximately 1.4 miles away.	Selected for visual simulation - provides representative distant views of Project features - distant views of the proposed Ramona OSA.

Notes:

OSA = Overburden storage area

TSF = Tailings storage facility

US 601 = US Highway 601

KOPs in bold were chosen for development of visual simulations and further analysis.

For each of these six KOP locations, visual simulations were developed that depict the visual impact of the Project during mining operations and following reclamation. Visual simulations are computer-generated images that simulate proposed Project features in their context as they would be seen from critical viewing locations and under specific viewing conditions matching baseline photographs of the same views. Visual simulations were based on 3D digital elevation models (DEMs) created from detailed CADD surface drawings that represented year 7 (peak of project activity) and year 15 (reclamation). In all cases, the baseline photographs were taken with a lens comparable to the human eye. Photographs were then modified within Adobe Photoshop to create representative visual simulations of the Applicant's Proposed Project site. These visual simulations of the Applicant's Proposed Project were compared to baseline photographs to assess the degree of visual change that would result from the Proposed Project at each of the six KOP locations.

N.3 Visual Simulations and Assessment of Representative Key Observation Points

N.3.1 KOP 1: US Highway 601 to proposed Ramona OSA

This KOP represents views of western slopes of the proposed Ramona OSA by public traveling on US 601. It is located along US 601 within the southern tip of the Project boundary. The topography in the area in the vicinity of KOP 1 is flat. A roadside vegetation berm along the highway would provide partial visual screening of the proposed Ramona OSA (Figure N-17). Nonetheless, the proposed Ramona OSA would be visible at this KOP during Year 7 of active mining (Figure N-18). The OSA would be located directly adjacent to the highway, separated from the road only by a vegetative buffer and a 5-foot-tall wire fence. The fence would be clearly visible from the road.

At Year 7, the total elevation of the overburden pile is projected to reach its maximum height of 350 feet. As such, the overburden pile would be highly visible from US 601. During Year 7, the unvegetated top of the OSA would be a light brown color, which would contrast with the surrounding green vegetation. The OSA design uses benches and terracing which allow for concurrent reclamation to begin during the active mining phases on the lower sections of the OSA. These vegetated lower sections would blend in with the surrounding vegetation with less visual impact during the active mining period. In Year 15 post-mining, the OSA would still be 350 feet tall but the site would be revegetated and would blend in with the surrounding environment (Figure N-19). Therefore, the only long-term visual impact would result from changes in topography to the existing landscape.



Figure N-17 KOP 1: Existing Conditions



Figure N-18 KOP 1: Year 7 – Mid-Point Conceptual Simulation



Figure N-19 KOP 1: Year 15 – Post-Reclamation Conceptual Simulation

The only KOP affected by the Applicant's Proposed Project with Modifications is KOP 1, as discussed below.

N.3.2 KOP 1: US Highway 601 to proposed Ramona OSA under Modified Project Alternative

This KOP represents views of western slopes of the Ramona OSA by public traveling on US 601. The KOP is located along US 601 within the southern tip of the Project boundary. The topography in this area is flat (Figure N-20). A roadside vegetation berm along the highway would provide partial visual screening of the Ramona OSA. Nonetheless, Ramona OSA would be visible at this KOP during Year 7 of active mining (Figure N-21). The OSA would be located directly adjacent to the highway but set back approximately 1,100 feet and partially shielded by a narrow vegetative buffer. A 5-foot tall wire fence would be clearly visible from the road.

At Year 7 during active mining, the total elevation of the overburden pile would reach its maximum height of approximately 250 feet. In contrast, the maximum height of the Ramona OSA under the Applicant's Proposed Project would be 350 feet. The overburden pile would be moderately visible from US 601 due to the setback from the highway. During Year 7, the OSA would also be a light brown color, which contrasts with the surrounding green vegetation. This color contrast would add to the visual impact. In Year 15, post-mining, the OSA would remain 250 feet tall, but the site would be revegetated and would blend in with the surrounding landscape (Figure N-22). Therefore, the only long-term visual impact would be topography changes visible from KOP 1.



Figure N-20 KOP 1: Existing Conditions under Modified Project Alternative



Figure N-21 KOP 1: Year 7 – Mid-Point Conceptual Simulation under Modified Project Alternative



Figure N-22 KOP 1: Year 16 – Post-Reclamation Conceptual Simulation
under Modified Project Alternative

N.3.3 KOP 4: Kershaw Industrial Park to Project Site

This KOP is located in the parking lot of the Kershaw Industrial Park. The parking lot is separated from the road by an open grassy area. The site represents the view of the Project (Johnny's PAG would be visible) from the closest office building (which is a minerals lab operated by Haile) in the Project vicinity. The topography in the area of KOP 4 is flat. There is a grassy area in the foreground of the viewshed, and US 601 intersects the middle ground view (Figure N-23). The vegetative buffer along US 601 would partially obstruct views of the Project site from this KOP, which is located approximately 0.4 mile from the proposed Johnny's PAG. During Year 7 active mining, Johnny's PAG would be visible in the background of the viewshed (Figure N-24). The foreground and middle ground of the viewshed would not be altered by the Project, and the vegetative buffer would remain in place. However, Johnny's PAG would be visible in the distant background, in places where the vegetative buffer is less dense.

In Year 7, Johnny's PAG would be approximately 150 feet tall. The OSA would consist of disturbed soils with a light brown color. This light coloration would contrast with the surrounding green vegetation, increasing the visual impact of the overburden temporarily during active mining. After Year 7, Johnny's PAG would continue to increase in height and at Year 15, it would reach a maximum height of 250 feet. The additional 100-foot increase in height between Year 7 and Year 15 is not obvious from KOP 4, and consequently would not cause an appreciable visual impact. At Year 15 post mining, natural vegetation would be re-established on Johnny's PAG, blending in with the surrounding vegetation (Figure N-25). The long-term visual impact from KOP 4 would be a new vegetated hill in the distant background that largely would be screened by the vegetative buffer and would blend in with the surrounding vegetation.



Figure N-23 KOP 4: Existing Conditions



Figure N-24 KOP 4: Year 7 – Mid-Point Conceptual Simulation



Figure N-25 KOP 4: Year 16 – Post-Reclamation Conceptual Simulation

N.3.4 KOP 6: US 601 near proposed overpass for TSF

An overpass would be constructed over US 601 so that trucks could haul ore and overburden across the highway. This overpass would also serve as a utility corridor for piping depressurization water to the process plant and contact water to the water treatment plant. Figure N-26 shows existing views from KOP 6 from US 601 near the location of the proposed TSF overpass. Figure N-27 provides a conceptual view of the proposed TSF overpass structure from KOP 6. The overpass and the trucks and equipment traveling across it would be directly visible to motorists on US 601, resulting in a short-term visual impact. Long-term visual impacts would occur in the event the overpass structure would remain post mining operations and reclamation; however, the visual impacts would be reduced as the number and frequency of trucks and equipment crossing the structure would be reduced. Following mine closure, if the overpass was removed, the KOP would return to similar visual character as under the existing conditions.



Figure N-26 KOP 6: Existing Conditions



Figure N-27 KOP 6: Conceptual Simulation of Views from US 601 of
Proposed TSF Overpass

N.3.5 KOP 7: US Highway 601 to Proposed TSF

This KOP represents public traveling on US 601 with direct views of the TSF, which would be located only 200 feet from the observation point, on the west side of the highway. The topography in the area of KOP 7 is flat, and a sparse vegetative buffer between US 601 and the Project site consists of intermittent trees and shrubs (Figure N-28). At the location of the proposed TSF site, Haile proposes to maintain existing pine trees and install additional plantings, if necessary, to provide a buffer of approximately 100 feet wide along Hwy 601 and along Duckwood Road to assist in visually screening the TSF. In Year 7 during active mining, the TSF would have reached a height of approximately 100 feet and would be clearly visible from the observation point (Figure N-29).

The vegetative buffer would provide limited visual screening of the TSF. The TSF would look like loose dirt and rocks, and would be light brown in color. Because the surrounding vegetation is also light brown, there would be no significant color contrast. In addition, a fence would be erected on the TSF side of the vegetative buffer. The wire fence would be approximately 5 feet tall. Furthermore, a dirt road would be constructed between the fence and the TSF. The road would blend in with the brown vegetation in the foreground and the brown TSF slopes in the background. Nonetheless, the road and any mining-related vehicles traveling along the road would be plainly visible to motorists on the highway.

The TSF facility would create a long-term visual impact from this KOP. At Year 15 post-mining, the TSF would be at its final height of 130 feet and the elevation increase would be obvious (Figure N-30). After construction is completed, Haile proposes to grade, revegetate and stabilize the soil of the outside embankment of the TSF to enhance aesthetics and meet regulatory requirements. The vegetative buffer and grading and seeding enhancement would help limit visual impacts; however, the TSF embankment would still be clearly visible from US 601. The TSF would be revegetated by Year 15, helping it blend into the surrounding vegetation. The road would be removed and revegetated, and would no longer be visible by Year 15. The fence would still be in place during Year 15, but it would be removed several years later, when reclamation activities have progressed further and the reclaimed Project site does not present any public safety risks.



Figure N-28 KOP 7: Existing Conditions



Figure N-29 KOP 7: Year 7 – Mid-Point Conceptual Simulation



Figure N-30 KOP 7: Year 16 – Post-Reclamation Conceptual Simulation

N.3.6 KOP 10: State Road 265 to proposed TSF

This KOP represents views of public traveling on SR 265 approaching the intersection with US 601. The TSF would be visible in the background, approximately 900 feet away. The topography in the area of KOP 10 is flat, and the vegetation on either side of US 601 consists of dense trees and shrubs that are slightly set back from the road (Figure N-31). The foreground of the viewshed is dominated by US 601 and flat grassy areas.

In Year 7 during active mining, the TSF would be visible in the distant background, approximately 900 feet away (Figure N-32). The TSF would rise approximately 100 feet higher than the surrounding landscape, but the visual impact of the elevation gain is greatly reduced by the distance. Moreover, the TSF would be visible only in a narrow portion of the viewshed where the highway meets the TSF on the horizon, because dense vegetation lining the highway would obscure the majority of the view of the horizon. The brown color of the TSF at Year 7 would contrast with the surrounding green vegetation and the grey asphalt road in the foreground, increasing the visual impact. The Project road and fence would not be visible from the KOP due to the great distance.

At Year 15, the TSF would rise approximately 130 feet higher than the surrounding land. The height difference between Year 7 and Year 15 is not noticeable from KOP 10. By Year 15 post-mining, the TSF would be revegetated, helping it blend in with the light green grass in the foreground and the darker green trees and shrubs lining the highway (Figure N-33). Similar to Year 7, the dense vegetation lining the road would obscure the TSA from view, except in a narrow portion of the viewshed in the distant background.



Figure N-31 KOP 10: Existing Conditions



Figure N-32 KOP 10: Year 7 – Mid-Point Conceptual Simulation



Figure N-33 KOP 10: Year 16 – Post-Reclamation Conceptual Simulation

N.3.7 KOP 15: State Road 157 to proposed Ramona OSA

This KOP represents views of public traveling on SR 157 with the Project site approximately 1.4 miles in the distance. The KOP represents the farthest locations from the Project site from which the Ramona OSA would be visible, due to a clearing in the vegetation along the roadway. The topography at KOP 15 consists of gently rolling hills. The vegetation in the foreground is a clear grassy area (Figure N-34). Tall, dense trees are in the background, and grassy hills are visible in the distant background beyond the trees.

In Year 7, Ramona OSA would be visible in the very distant background (Figure N-35). The height of the OSA would be 350 feet above the surrounding vegetation, but due to the rolling topography and the large distance, the additional height would barely be visible from this KOP. In Year 7 during active mining, the overburden area would be a light brown, and would contrast with the green vegetation in the foreground. However, the overburden area is located so far away that the color contrast is barely noticeable. The views from KOP 15 during Year 15 would be comparable to those during Year 7. The height of the proposed Ramona OSA would not increase between Years 7 and 15 (Figure N-36). The color of the OSA post reclamation would be greener and darker, helping it blend in with the surrounding vegetation. While the Ramona OSA would be visible from the observation point, the views would be so distant that the long-term visual impact would be minimal.



Figure N-34 KOP 15: Existing Conditions



Figure N-35 KOP 15: Year 7 – Mid-Point Conceptual Simulation



Figure N-36 KOP 15: Year 16 – Post-Reclamation Conceptual Simulation

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